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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,763	01/26/2007	Koji Choki	290156US40PCT	8394
22850	7590	03/25/2010	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			WALKE, AMANDA C	
			ART UNIT	PAPER NUMBER
			1795	
			NOTIFICATION DATE	DELIVERY MODE
			03/25/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/579,763	Applicant(s) CHOKI ET AL.	
	Examiner Amanda C. Walke	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al (6,538,087 or WO 02/10231; citations are for the US Patent).

Zhao et al disclose a polymeric composition for forming waveguides including a norbornene polymer/oligomer, crosslinking agent, a catalyst system having a pro-catalyst and co-catalyst which fall within the scope of the instant claim limitations, antioxidant, photoinitiator, and a polymerizable/ cross-linking monomer (column 5, lines 25-55, column 7, column 17, columns 21 and 22, columns 49 and 50). Norbornene-type compound suitable for use in either or both on the polymerizable monomer or polymer/oligomer include hexyl and/or benzyl-norbornenes, alkyl substituted phenyl norbornenes (phenethyl, C34), diphenylmethyl silane norbornenes, bisnorbornenemethoxydimethyl or diphenylmethyl silanes(C39; lines 25-65) (formulas VIII), as well as others (column 34, column 47, lines 38-53).

It would have been obvious to one of ordinary skill in the art to employ a polymer and crosslinkable/polymerizable monomer each having one of these compounds, and a co-polymer or ter-polymer would have a different refractive index than a single monomer (column 5, 2-4; and teachings where compounds of VII, VIIa, and VIIb may be employed in the polymer with a monomer).

Information Disclosure Statement

3. The information disclosure statement filed 10/26/09 and 3/5/2010 fail to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Response to Arguments

4. Applicant's arguments filed 1/22/10 have been fully considered but they are not persuasive. Applicant has argued that the Zhao et al reference fails to teach a pro-catalyst and co-catalyst wherein the "procatalyst is convertible to a latently active form, the latently active form of the procatalgst is convertible to an active form, and the active form of the procatalyst is capable of polymerizing the at least one monomer" as newly amended, and a co-catalyst wherein the "cocatalyst is suitable for converting the procatalyst to the latently active form upon exposure to actinic radiation and the latently active form is convertible to the active form upon heating to a first temperature. "Zhao et al may not specifically state that the pro-catalyst and co-catalyst are capable of performing in the instantly claimed manner, however, the Zhao reference teaches similar co and pro-catalysts as those

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described as preferred embodiments in the instant specification. On page 9 of the instant specification, $\text{Pd}(\text{PCy}_3)_2(\text{OAc})_2$, is listed as a preferred pro-catalyst, while broader structures for suitable pro-catalysts are located in [0027]. The Zhao reference teaches similar pro-catalysts, with a similar one, Allyl Pd-PCy₃-TFA being employed. Applicant has not demonstrated that the procatalyst and co-catalyst of the reference, which are of almost identical constitution do not function in the manner they instantly claimed components must *be capable* of. Additionally, the co-catalyst as described by the reference and the instant specification in [0024], is a weakly coordinating counteranion complex [WCA]. Exemplified by the instant specification and employed in the examples of the reference is disclosed above is a borate such as tetrakis(pentafluorophenyl)borate, which is listed as preferred by the reference also in column 17, line 62-column 18, line 21). While the aluminate is employed in the exemplified compound, clearly the borate is specifically contemplated as well, as it is employed in another example with a Li ion. Also, while the reference employs PCY₃ as (L')_x, and acetates as preferred for (L'')_y, and z may be zero, and x and y are each 2 (in the examples z and x are each 2, y is 0; obvious to replace R'z with L''y as in the broader formula I in column 7), the reference teaches a compound meeting the claim limitations. Also, as discussed above, the compounds exemplified by the reference are of similar construction (in addition to the broader teachings for the pro-catalyst) have not been shown to be *incapable* of functioning in functional limitations of claim 1. With respect to the polymer, while the reference does not explicitly state that polymer and the monomer would have different refractive indexes, the reference as cited above, teaches a cyclic polymer having the instantly claimed norbornene first and second groups, and an additional

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crosslinkable monomer/ norbornene, which would inherently have different refractive indexes as instantly claimed. Therefore the rejection is maintained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C. Walke whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amanda C Walke
Primary Examiner
Art Unit 1795

/Amanda C Walke/
Primary Examiner, Art Unit 1795